Geometry Honors Series
Chapter 1 Test Review

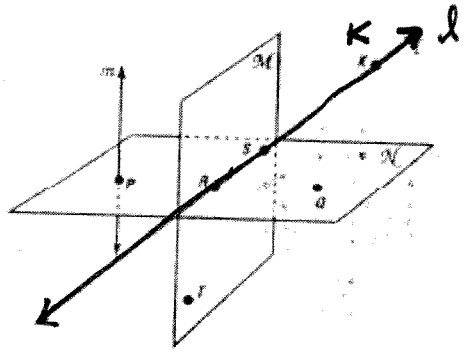
Name: _____
Date: _____ Block: _____

Matching:

E 1. Points that lie on the same plane.
I 2. The point of segment exactly halfway between the endpoints of the segment.
F 3. The set of points that two or more geometric figures have in common.
A 4. A location that has neither shape nor size
D 5. Points that lie on the same line.
H 6. Segments that have the same measure
B 7. Made up of points and has no thickness or width.
K 8. Has one endpoint and extends indefinitely in one direction.
O 9. Are two nonadjacent angles formed by two intersecting lines.
L 10. Two angles with measures that have a sum of 90.
C 11. A flat surface made up of points that extends infinitely in all directions.
M 12. Two angles with the measure that have a sum of 180.
G 13. A measurable part of a line that consists of two points, called endpoints, and all of the points between them.
N 14. A pair of adjacent angles whose non-common sides are opposite rays.
J 15. A segment, line, or plane that intersects a segment at its midpoint.

Word Bank
A Point
B Line
C Plane
D Collinear
E Coplanar
F Intersection
G Line Segment
H Congruent segments
I Midpoint
J Segment bisector
K Ray
L Complementary angles
M Supplementary Angles
N Linear Pair
O Vertical Angles

Use the figure at the right for questions 16 –20.



RSK 16. Name three collinear points.

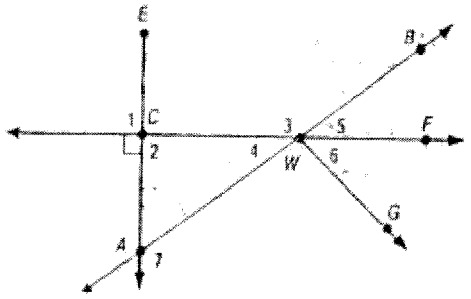
_____ 17. P, Q, R, and S are coplanar.

$\overleftrightarrow{RK}$ 18. Give another name for line *l*.

$\overleftrightarrow{RS}$ 19. Plane *N* and plane *M* intersect at _____.

$\overrightarrow{SK}, \overrightarrow{SR}$ 20. Name a pair of opposite rays.

Use the figure at the right for questions 21 – 22.



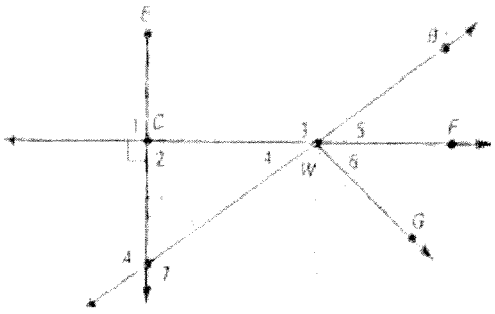
B 21. Which angle appears to be obtuse?

A. ∠2 B. ∠7 C. ∠5 D. ∠4

B 22. ∠4 and ∠5 are _____.

A. adjacent B. vertical C. linear pair D. complementary

Use the figure at the right for questions 23 – 26.



C 23. Which angle appears to be acute?

A. ∠2 B. ∠3 C. ∠6 D. ∠AWF

A 24. ∠5 and ∠6 are _____.

A. adjacent B. vertical C. complementary D. supplementary

B 25. Which angles are supplementary?

A. ∠CWF
B. ∠BWF & ∠FWA
C. ∠FWG & ∠GWA
D. ∠CWB & ∠BWG

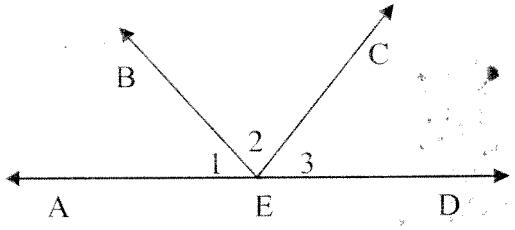
C 26. Name a right angle.

A. ∠CWF B. ∠BWF C. ∠ACW D. ∠GWA

B 27. If $\overline{AB}$ bisects $\overline{CF}$, name a pair of congruent segments.

A. $\overline{AW}$ & $\overline{WB}$ B. $\overline{CW}$ & $\overline{WF}$ C. $\overline{AB}$ & $\overline{CF}$ D. $\overline{WB}$ & $\overline{WF}$

Use the figure at the right to answer questions 29 – 31.

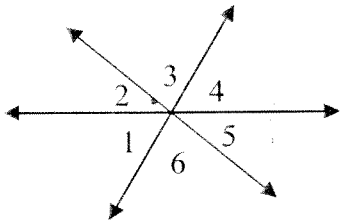


∠CED 29. Give another name for ∠3.

$\overrightarrow{EA}$ $\overrightarrow{EB}$ 30. Name the sides of ∠1.

E 31. Name the vertex of ∠2.

Use the figure at the right to answer questions 32 – 33.



27° 32. If m∠2 = 27°, then m∠5 = ?

71° 33. If m∠1 = 33° and m∠6 = 76°, then m∠5 = ?

Find the measure.

$2\frac{3}{4}$ 34. In inches: AB = ?

SHOW ALL WORK for the following problems.

35. **Suppose Q is between R and P.** If PQ = 3x, QR = 5x + 1, and PR = 17, find x, PQ, and QR. (Draw a Picture!)

x = 2

PQ = 6, QR = 11

R 5x+1 Q 3x P

$5x+1+3x = 17$

$8x+1 = 17$

$x = 2$

36. Find x and the measure of $\overline{AC}$ if B is the midpoint of $\overline{AC}$.

x = 4

AC = 38

A B C

(6x -5) (2x+11)

$6x-5 = 2x+11$

$4x = 16$

$x = 4$

37. Find the length of $\overline{WT}$ if W(9, -2) and T(-6, 7).

WT = $\sqrt{306}$

WT = 17.5

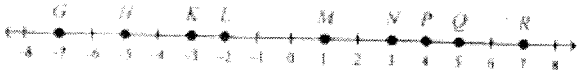
$\sqrt{(-6-9)^2+(7+2)^2}$

$\sqrt{(-15)^2+9^2} = \sqrt{225+81}$

$= \sqrt{306}$

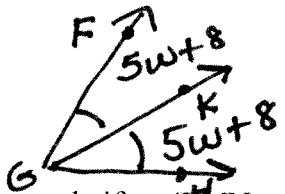
38. Use the number line to find the measure of $\overline{RK}$.

RK = 10



39. If $\overrightarrow{GK}$ bisects ∠FGH and m∠FGK = (5w + 8)° and m∠FGH = 101°, find w. (Draw a Picture!)

w = 8.5

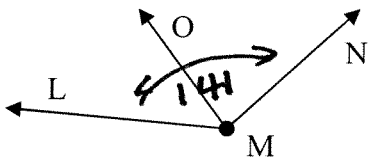


$10w+16 = 101$

40. Find the measure of the missing angle if m∠LMN = 141° and m∠LMO = 86°.

m∠OMN = 55°

141-86



41. Find the value of x and m∠2 if m∠ABC = (6x)°, m∠1 = (2x – 17)°, and m∠2 = (5x – 1)°.

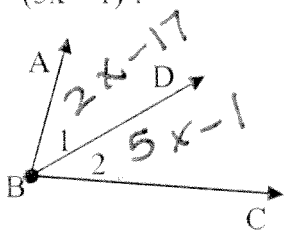
x = 18

m∠2 = 89°

$6x = 2x - 17 + 5x - 1$

$6x = 7x - 18$

$x = 18$



42. If m∠ABD = (7x + 1)° and m∠DBC = (4x + 1)°, find the value of x so that $\overrightarrow{AB} \perp \overrightarrow{BC}$.

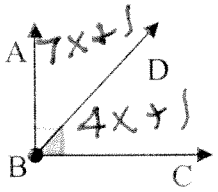
x = 8

$7x+1 + 4x+1 = 90$

$11x + 2 = 90$

$11x = 88$

$x = 8$



43. Find the midpoint of $\overline{EF}$ if E(6, -8) and F(-2, 7).

(2, -0.5)

$\frac{6-2}{2} \quad \frac{-8+7}{2}$

$\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

44. Find the value of x and the measure of the two angles.

x = 18

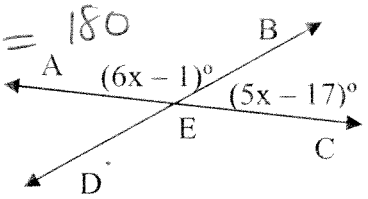
m∠AEB = 107°, m∠BEC = 73°

$6x-1 + 5x-17 = 180$

$11x - 18 = 180$

$11x = 198$

$x = 18$



45. Find the value of x and the measure of the two angles.

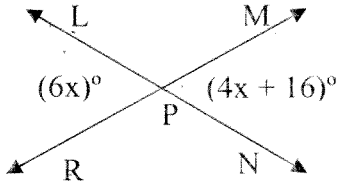
x = 8

m∠LPR = 48°, m∠MPL = 132°

$6x = 4x + 16$

$2x = 16$

$x = 8$



Draw, Set up and solve for both missing angles

46. The measure of a complementary angle is 4 times the measure of the angle. Find the measure of both angles.

18° and 72°

x
4x

$5x = 90$

$x = 18$

47. The measure of a supplementary angle is 16 less than 3 times the measure of the angle. Find the measure of both angles.

49° and 131°

x

$3x - 16$

$4x - 16 = 180$